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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,352	08/19/2003	Chong Hun Yi		5847
25859	7590	04/21/2004	EXAMINER	
WEI TE CHUNG			LEON, EDWIN A	
FOXCONN INTERNATIONAL, INC.				
1650 MEMOREX DRIVE			ART UNIT	
SANTA CLARA, CA 95050			2833	

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

W

Office Action Summary	Application No.	Applicant(s)	
	10/644,352	YI ET AL.	
	Examiner	Art Unit	
	Edwin A. León	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma et al. (U.S. Patent No. 5,971,800) in view of Cobaugh et al. (U.S. Patent No. 4,349,237). With regard to Claims 1-2, Azuma et al. discloses an electrical connector (5) comprising: an insulative housing (50) comprising a receiving slot (53) and a tower (56); a signal terminal (60) being retained in the insulative housing (50); and a power contact (70) being retained in the tower (56), the power contact (70) comprising a retaining plate (71) on two different parallel surfaces. See Figs. 1-8.

However, Azuma et al. doesn't show the electrical connector adapted for electrically receiving a daughter PCB, the receiving slot for insertion of the daughter PCB, the signal terminal adapted for electrically connecting with the daughter PCB, the power contact adapted for electrically connecting with the daughter PCB and the power contact comprising a mating arm.

Cobaugh et al. discloses a similar connector (20) adapted for electrically receiving a daughter PCB (shown in Fig. 1) and having a receiving slot (52) for insertion

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of the daughter PCB (shown in Fig. 1), a signal terminal (24) adapted for electrically connecting with the daughter PCB (shown in Fig. 1), a power contact (26) adapted for electrically connecting with the daughter PCB (shown in Fig. 1) and the power contact (26) comprising a mating arm (74). See Figs. 1-8.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the connector of Azuma et al. by making the connector adapted for electrically receiving a daughter PCB and having a receiving slot for insertion of the daughter PCB, a signal terminal adapted for electrically connecting with the daughter PCB, a power contact adapted for electrically connecting with the daughter PCB and the power contact comprising a mating arm as taught in Cobaugh et al. in order to make the connector more versatile and able to guide and retain daughter PCB's inside the connector more effectively. (Cobaugh et al. Column 1, Lines 6-12).

With regard to Claim 3, Azuma et al. discloses the power contact (70) comprising a pair of retaining plates (71) for engaging with the insulative housing (50). See Figs. 1-8.

With regard to Claim 4, Azuma et al. discloses the power contact (70) comprising a connecting arm (72) for connecting the retaining plates (71) together. See Figs. 1-8.

With regard to Claims 5-7 and 9, Azuma et al. discloses a power contact (70) retained in an electrical connector (5) and a mother PCB (K5), comprising: a retaining plate (71) adapted for being engageably received in the electrical connector (5); a soldering tail (73) extending downwardly from the retaining plate (71) adapted for soldering onto the mother PCB (K5); and a connecting arm (72) extending from the

retaining plate (71), the retaining plate (71) are located on two different parallel surfaces. See Figs. 1-8.

However, Azuma et al. doesn't show the power contact adapted for electrically connecting a daughter PCB, a mating arm adapted for electrically connecting with the daughter PCB; the connecting arm extending from the retaining plate and being adapted for engageably received in the daughter PCB and the mating arm extends from a bottom end of the retaining plate, the mating arm extends from an inner side of the retaining plate.

Cobaugh et al. discloses a similar connector (20) having power contact (26) adapted for electrically connecting a daughter PCB (shown in Fig. 1), a mating arm (74) adapted for electrically connecting with the daughter PCB (shown in Fig. 1), and the mating arm (74) extends from a bottom end of the retaining plate (78), the mating arm (74) extends from an inner side of the retaining plate (78). See Figs. 1-8.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the connector of Azuma et al. by making the power contact adapted for electrically connecting a daughter PCB, a mating arm adapted for electrically connecting with the daughter PCB, and the mating arm extends from a bottom end of the retaining plate, the mating arm extends from an inner side of the retaining plate as taught in Cobaugh et al. in order to make the connector more versatile and able to guide and retain daughter PCB's inside the connector more effectively. (Cobaugh et al. Column 1, Lines 6-12).

With regard to Claim 8, the combination of Azuma et al. and Cobaugh et al. discloses the claimed invention except for the mating arm extending from a top end of the retaining plate.

Still, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the mating arm extending from a top end of the retaining plate, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

With regard to Claims 10 and 12-14, Azuma et al. discloses an electrical connector (5) assembly comprising: an insulative housing (50) defining an elongated central slot (53) extending along a longitudinal direction thereof; two rows of signal contacts (60) located by two sides of the central slot (53); a tower (56) located around one end of the housing (50), the central slot (53) extending into the tower (56); and a plurality of power contacts (70) located in the tower (56) along the longitudinal direction, each of the power contacts (70) including a shielding plate (71) located by the two sides of the central slot (53); wherein in each of the power contacts (70), the shielding plate (71) defines a first plane. See Figs. 1-8.

However, Azuma et al. doesn't show the power contacts including a pair of mating arms located by the two sides of the central slot, the pair of mating arms defines a second plane offset from the first plane along the longitudinal direction, a daughter board is received in the central slot to engage the signal contacts and mating arms of the power contacts, the daughter board defining a notch receiving the portion therein, the mating arms of the power contacts and the signal contacts are essentially located at

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a same level which is lower than another level the shielding plates of the power contacts are located at.

Cobaugh et al. discloses a similar connector (20) having power contacts (26) including a pair of mating arms (74) located by the two sides of the central slot (52), the pair of mating arms (74) defines a second plane offset from the first plane along the longitudinal direction, a daughter board (shown in Fig. 1) is received in the central slot (52) to engage the signal contacts (24) and mating arms (74) of the power contacts (26), the daughter board (shown in Fig. 1) defining a notch (lower part of 14) receiving the portion (70) therein, the mating arms (74) of the power contacts (26) and the signal contacts (24) are essentially located at a same level which is lower than another level the shielding plates (78) of the power contacts (26) are located at. See Figs. 1-8.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the connector of Azuma et al. by having the power contacts including a pair of mating arms located by the two sides of the central slot, the pair of mating arms defines a second plane offset from the first plane along the longitudinal direction, a daughter board is received in the central slot to engage the signal contacts and mating arms of the power contacts, the daughter board defining a notch receiving the portion therein, the mating arms of the power contacts and the signal contacts are essentially located at a same level which is lower than another level the shielding plates of the power contacts are located at as taught in Cobaugh et al. in order to make the connector more versatile and able to guide and retain daughter PCB's inside the connector more effectively. (Cobaugh et al. Column 1, Lines 6-12).

With regard to Claims 11, Azuma et al. discloses each of the power contacts (70) defining a portion (70) crossing the central slot (53). See Figs. 1-8.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (U.S. Patent No. 6,645,002), Lee (U.S. Patent No. 6,347,039), Azuma et al. (U.S. Patent No. 6,007,352), and Cobaugh et al. (U.S. Patent No. 4,241,381) disclose connectors having power and signal contacts, towers and insulating housings.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edwin A. Leon 4-21

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EAL
April 16, 2004